



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/057,277      | 01/25/2002  | Monty A. Forehand    | P1598US01           | 3445             |

7590

10/18/2005

Fellers, Snider, Blankenship, Bailey & Tippens P.C  
Bank One Tower  
100 North Broadway  
Suite 1700  
Oklahoma City, OK 73102-8820

EXAMINER

WONG, KIN C

ART UNIT

PAPER NUMBER

2651

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                 |                                    |  |
|------------------------------|---------------------------------|------------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>✓ 10/057,277 | Applicant(s)<br>FOREHAND, MONTY A. |  |
|                              | Examiner<br>K. Wong             | Art Unit<br>2651                   |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 January 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/25/02</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

Claims (9-17) are objected to because of the following informalities: these claims contain a term "step" in the apparatus claims which are restricted with a special patent terminology. Examiner suggests a replacement of "instruction" or "process" for the "step" term in an apparatus claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims (3 and 12) are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims (3 and 12) recited the phrase "... inner information track to a first information between the inner information and the outer information track" is not clear on the context of the "first information" as pertaining to what information. Examiner has interpreted as the "first information track" for this Office action.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2651

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims (1-17) are rejected under 35 U.S.C. 102(b) as being anticipated by Forehand (5859738).

Regarding claim 9: Forehand discloses a data storage device including:

a basedeck (chassis) supporting a spindle motor assembly (as depicted in figure 1 of Forehand);

a disc (element 12 in figure 1) with a recording surface having an information track attached to the spindle motor assembly, the information track being for data storage;

a head stack assembly supported by the basedeck and having a read/write head rotationally positionable adjacent the recording surface, the read/write head including a read element for reading data from the information track and a write element for writing data to the information track (as depicted in figure 2 of Forehand); and

a fly height adjusted sweep cycle routine (col. 5, line 48 to col. 6, line 19 of Forehand) provided by steps (instructions or processes) for reducing wear between the disc and the read/write head of the data storage device (col. 1, lines 20-29; col. 2, line 42 to col. 3, line 10; col. 3, lines 48-61 of Forehand). Thus, Forehand discloses an apparatus for sweeping or clearing the debris of the disk and the head.

Regarding claim 10: Forehand teaches that in which the steps for reducing wear between the disc and the read/write head of the data storage device comprising steps of: (a) detecting an idle condition of the data storage device; (b) raising a fly height of the read/write head to a maximum setting; (c) executing a sweep cycle routine; and (d)

Art Unit: 2651

lowering the read/write head to a data transfer fly height upon receipt of a seek command to improve the reliability of the data storage device (col. 2, line 56 to col. 3, line 27; col. 3, lines 48-61 and col. 4, lines 11-16 of Forehand).

Regarding claim 11: Forehand teaches that in which the sweep cycle routine of executing step (c) is executed by steps including: (c1) setting a sweep cycle timer; (c2) moving the read/write to an inner information track of the disc; (c3) lowering the fly height of the read/write head; (c4) aligning the read/write head with an outer information track of the disc; (c5) raising the fly height of the read/write head to the maximum setting; and (c6) oscillating (or head cycling) the read/write for a predetermined period of time.

Regarding claim 12: Forehand teaches that in which the read/write head of aligning step (c4) is aligned with the outer information track of the disc by steps including: (c4a) moving the read/write head from the inner information track to a first information {track} between the inner information track and the outer information track; (c4b) dwelling on the first information between the inner information track and the outer information track for a predetermined period of time; (c4c) dislodging debris from a recording surface of the disc; (c4d) aligning the read/write head with a second information track between the inner information track and the outer information track; (c4e) dwelling on the second information track between the inner information track and the outer information track for a predetermined period of time; (c4f) dislodging debris from the recording surface of the disc; and (c4g) repeating process steps (c4a) through

Art Unit: 2651

(c4f) for each information track between the inner information track and the outer information track (col. 4, lines 22-35 of Forehand).

Regarding claim 13: Forehand depicts in figure 3 that in which the first information track is adjacent the inner information track (see associated descriptions for details).

Regarding claim 14: Forehand depicts in figure 3 that in which the second information track is adjacent the first information track (see associated descriptions for details).

Regarding claims 15 and 16: the limitations of in which the disc is rotated by a spindle motor assembly of the data storage device at a substantially constant rotational velocity, and in which the predetermined period of time for dwelling on each information track, between the inner information track and the outer information track of (c4g) is less (or at least) than a time for the disc to rotate one revolution are considered inherent because in col. 6, lines 3-7 where Forehand describes the similar dwelling on the track in term of time which could be converted to in terms disk rotations.

Regarding claim 17: Forehand teaches that in which the read/write head of aligning step (c4) collects debris, and in which the predetermined period of time of oscillating step (c6) including a time for executing a sequence of short seeks to dislodge the debris collected on the read/write head (col. 5, line 48 to col. 6, line 19 of Forehand).

Regarding claims 1-8: method claims (1-8) are drawn to the method of using the corresponding apparatus claimed in claims (9-17). Therefore method claims (1-8)

correspond to apparatus claims and are rejected for the same reasons of anticipation as used above.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McNeil (4384311), Sasmoto (4510541), Gregory et al (5351156) and Smith (5793553) are cited for disk and head cleaning in the drive.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Wong whose telephone number is (571) 272-7566.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

kw

14 Oct 05

A handwritten signature in black ink, appearing to be 'dy' or similar, located in the lower right quadrant of the page.